Meade® 8" LX90 Schmidt-Cassegrain Telescope

Now you can buy the telescope of a lifetime at a price you probably never thought possible.

The Meade 8" LX90 is the first full-capability, computer-controlled 8" Schmidt-Cassegrain ever offered in its price range. The LX90 Schmidt-Cassegrain is not only a high-resolution visual observing instrument but also is fully qualified for the more advanced areas of astronomy, including long-exposure CCD-imaging and astrophotography.

Special features of the 8" LX90 include: (a) a die-cast-aluminum *double-tine* fork mount that rigidly supports the optical tube in all sky orientations; (b) *worm gears* of 4.9"-diameter on both telescope axes that permit smooth sidereal-rate tracking of celestial objects as well as precise guiding corrections during long-exposure imaging; (c) a chromed-steel variable-height tripod that provides all the rigidity required in sensitive field applications — in fact, the same tripod as provided with the Meade 8" LX200GPS.

Autostar Computer Controller: The LX90's *standard-equipment* Autostar controller connects to the telescope's control panel and permits an incredible array of telescope options:

- *Automatic GO TO capability* at 6.5°/sec on both axes, simultaneously, to 30,223 database objects, including:

  13,235 deep-sky objects sorted by named objects; galaxies; diffuse nebulae; planetary nebulae; star clusters; including the complete Messier, Caldwell, IC, and NGC catalogs;

  16,800 stars sorted by name, SAO catalog numbers, double and variable stars; the centroids of the 88 constellations; plus 200 memory locations for user-defined objects.

  50 objects in the solar system: 8 major planets from Mercury to Pluto; the Moon; 26 asteroids; 15 comets;

  50 Earth satellites, including the International Space Station and Hubble telescope;

Meade 8" LX90 Schmidt-Cassegrain Telescope, shown with standard-equipment Autostar controller and field tripod.

The LX90's control panel allows for external powering of the telescope, if desired, as well as for external functions such as an electric focuser, illuminated reticle eyepiece, or CCD autoguider, using the #909 APM *(facing page)*.

- *Automatic GO TO capability* to *any* object of known RA and Declination.
- *Nine selectable slew speeds:* 6.5°/sec, 3°/sec, and 1.5°/sec, plus 128x, 64x, 16x, 8x, 2x, and 1x sidereal.

"The 8" LX90's GO TO is awesome. Objects are always in the field of view and close to center. I am just starting to do CCD imaging; my first pictures of the Moon are great and I can't wait to move on to deep-space. I used to have a [competing brand of Go To] 8" Schmidt-Cassegrain telescope and there is no comparison. Thanks Meade for putting out such a great product."

— John J. Watzke, Jr., Abita Springs, LA.

"When the Meade 8-inch LX200 debuted in 1992, it quickly became the standard to which all computerized telescopes were compared. But when it comes to brain power, [the LX90's] Autostar by any measure is a lot smarter than the [original] LX200 software…the LX90 got high marks on the optical bench as well…a Ronchi test on an artificial star showed the optics to be smooth and well corrected…the overall optical quality…[is] certainly in line with Meade's claim of "diffraction limited"…altazimuth tracking was excellent. One evening I centered the Whirlpool Galaxy, M51, in the eyepiece and let the scope track unattended as the galaxy rose in the northeast and passed near the zenith. After more than four hours it was still dead-center in the field…The computer pointing is also remarkably accurate…pointing [was] 100 percent accurate (scout's honor, not one miss in hundreds of Go To moves)…Autostar has now matured to the point that it is as reliable as the LX200 control system…With a strong background in astrophotography, I was particularly interested to see if the LX90 would live up to its [long-exposure astro imaging] claims. The short answer? It certainly does, and then some. Indeed for a general-purpose telescope, this is one of the best ones I've ever tested out of the box for long-exposure imaging…When you take into account cost, features, quality, performance, and standard equipment, the LX90 is an exceptionally attractive package."

— from the review in *Sky & Telescope,* July, 2001.

- *Control of the telescope* through your personal computer, using the RS-232 serial interface. (Requires optional #505 Connector Cable Set.)*
- *Fast alignment of the telescope* in either equatorial or altazimuth modes using any of three alignment functions, including the Meade-proprietary Easy Align.
- *Unlike the hand controllers* included with competing 5" and 8" SCT's (and which require disassembly of the telescope electronics for memory upgrade), *Autostar is fully upgradeable over the Internet*: add the positions of new comets, update the positions of Earth satellites, even add new software as it becomes available.

LX90 or LX200GPS? For many observers the 8" LX90 is all the telescope ever required. The LX90 includes the exact same 8" f/10 optical system as the 8" LX200GPS *(p. 32),* so that the visual observing experience is identical in both instruments. Notwithstanding the many virtues of the LX90, however, we still recommend the LX200GPS for those amateurs who can afford the higher price of the LX200GPS and who intend an extensive program of CCD imaging, astrophotography, or deep-space observing. The LX200GPS's 145,000-object database is almost five times the size of the LX90's, and the LX200GPS slews at 8°/sec to a pointing precision of 2 arc-minutes or better, compared to the 5 arc-minute pointing precision of the LX90. The LX200GPS, with its oversize fork arms, larger worm gears, GPS alignment, zero image-shift microfocuser, primary mirror lock, and dual-axis Smart Drive™, is the most advanced altazimuth-equatorial platform ever offered in a production 8" Schmidt-Cassegrain. The real answer is that one can not go wrong with either telescope: the proper choice depends on the user's long-term applications and budget.

*For PC's with USB ports order the Meade **USB to RS-232 Bridge Cable,** which permits connection between the telescope's RS-232 serial interface and the PC's USB port. *(See p. 63.)*

Optional Ultra-High Transmission Coatings (UHTC): As described on pp. 26 - 27, Meade UHTC coatings increase total telescope light transmission, averaged over the visible spectrum, by about 20%, for greatly enhanced photo-visual image brightness. If desired, the UHTC must be specified at the time of telescope purchase.

Cordless Operation: The LX90 is powered at 12 volts DC from (user-supplied) C-cell batteries loaded through the upper surface of the telescope's drive base. The telescope may also be powered from an automobile cigarette lighter plug or from standard 115vAC home outlets, using optionally available power cords.

Equatorial Wedge: The optional 8" equatorial wedge is required for long-exposure astrophotography and permits precise polar alignment of the LX90 in the equatorial mode. For short exposure images (less than about 5-minutes) the wedge is not required.

The #909 APM, a small (1.5" x 1.5" x 0.75") auxiliary control panel, augments the functions of the LX90's main control panel.

#909 Accessory Port Module (APM): The optional #909 APM attaches to the rear-cell of the LX90 and connects by cable to the AUX port on the telescope's control panel. The APM includes auxiliary connectors for plug-in of such accessories as corded models of illuminated reticle eyepieces, *(p. 106),* the #1206 Electric Focuser, *(p. 63),* or a CCD autoguider.

Specifications: 8" Model LX90 — Each complete telescope includes 8" Schmidt-Cassegrain optical tube assembly (D = 203mm, F = 2000mm f/10) with MgF_2 coatings on the correcting lens and standard aluminum coatings on the primary and secondary mirrors (Ultra-High Transmission Coatings, p. 26, available optionally); double-tine fork mount with ball bearings on both axes and with dual-axis 4.9" worm gears; electronic control panel; electric slow-motion controls on both axes; setting circles in RA and Dec.; #497 Autostar hand controller with digital readout display, 9-speed drive controls on both axes, and GO TO controller; 30,223-object onboard celestial software library; internal battery port accepts 8 (user-supplied) C-cells (optional 25 ft. cords permit powering from either 12v DC auto cigarette lighter plug or from 115v AC home outlet); 8 x 50mm viewfinder; 1.25" diagonal prism; Series 4000 Super Plössl 26mm eyepiece; variable-height standard field tripod; operating instructions.